

**COFFEA-AIMEDICS: AN AUTOMATED COFFEE
LEAVES DISEASES DIAGNOSIS SYSTEM**

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Abstract

Coffee plants are one of the important agricultural commodities among all the crops and they should have a sustainable growth without any food insecurities. Traditionally farmers inspect the diseases or utilizes the help of experts in phytology and observe plant diseases and take preventive measures accordingly especially use of proper fungicides etc. Monitoring the plants manually with human naked eye based on symptoms is a time-consuming task and will not produce satisfactory results all the time. Also, the unavailability of domain experts in undeveloped regions and are in highly demand and charge high values.

Hence the promotion of smart agriculture and better disease management and decision support systems are highly crucial for the proper plant growth and increase the yields of coffee plants with less human intervention. In this automated system, we propose a deep learning approach in order solve the coffee plant related diseases effectively and accurately and contribute a support system for better decision making for the agricultural expertise and field officers to diagnose the diseases and use the recommended remedies at early possible which will contribute toward the sustainable growth of the coffee plants.

Key words: Deep learning, Coffee Leaf Rust, Image Classification, Convolutional Neural Network